

AMENDMENTS TO THE CLAIMS

Claims 1-30 (Canceled)

Claim 31 (New): A method of preparing a melt-processable thermoplastic composition, the method comprising mixing:

- (a) 50 to 99.5 wt% of a melt-processable thermoplastic polymer; and
- (b) 0.5 to 50 wt% of a particulate copolymer comprising the residues of a monomer mixture comprising at least 50 wt% of methyl methacrylate (MMA), at least 1 wt% and less than 20 wt% of a copolymerisable acrylic comonomer comprising at least one alkyl acrylate or methacrylate and at least 0.1 wt% of a copolymerisable cross-linking monomer, said particles having a maximum dimension of 5 mm; wherein the melt-processable thermoplastic polymer and the particulate copolymer are mixed under shear so that particles of said particulate copolymer are broken down.

Claim 32 (New): A method as claimed in claim 31, wherein said particles have a maximum dimension which is less than 1 mm.

Claim 33 (New): A method as claimed in claim 31, wherein at least 75% of said particles of the particulate copolymer are of such a size that they pass through a 300 μm sieve.

Claim 34 (New): A method as claimed in claim 31, wherein the weight averaged diameter of said particles of the particulate copolymer is greater than 100 μm as measured in accordance with ASTM D1921.

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Claim 35 (New): A method as claimed in claim 34, wherein the weight averaged diameter of said particles of the particulate copolymer is greater than 150 μm as measured in accordance with ASTM D1921.

Claim 36 (New): A method as claimed in claim 31, wherein the weight averaged diameter of said particles of the particulate copolymer is less than 500 μm , especially less than 250 μm as measured in accordance with ASTM D1921.

Claim 37 (New): A method as claimed in claim 31, wherein said copolymerisable acrylic comonomer is an alkyl acrylate.

Claim 38 (New): A method as claimed in claim 31, wherein said particulate copolymer is formed from the residues of said monomer mixture comprising at least 69.9 wt% MMA.

Claim 39 (New): A method as claimed in claim 31, wherein said particulate copolymer is formed from the residues of said monomer mixture comprising less than 95 wt% MMA.

Claim 40 (New): A method as claimed in claim 31, wherein said particulate copolymer is formed from the residues of said monomer mixture comprising at least 5 wt% and less than 20 wt% of said copolymerisable acrylic comonomer.

Claim 41 (New): A method as claimed in claim 31, wherein said particulate copolymer is formed from the residues of said monomer mixture comprising less than 5 wt% of the residues of said copolymerisable cross-linking monomer.

Claim 42 (New): A method as claimed in claim 31 which includes at least 1 wt% and less than 40 wt% of said particulate copolymer.

Claim 43 (New): A method as claimed in claim 31, wherein at least 20 wt% of particles of said particulate copolymer are between 60 (250 μ m) and 80 (177 μ m) mesh.

Claim 44 (New): A method as claimed in claim 31, wherein the melt-processable thermoplastic polymer forms a matrix and is of polymethylmethacrylate homopolymer or copolymer derived from a monomer mixture comprising 60-100 wt% methyl methacrylate and 0-40 wt% of at least one other copolymerisable alkyl acrylate or methacrylate.

Claim 45 (New): A method as claimed in claim 31, wherein said melt-processable polymer and said particulate copolymer are not cast after contact together.

Claim 46 (New): A method as claimed in claim 31, wherein said melt-processable polymer and said particulate copolymer are mixed by extrusion under conditions such that particles of said particulate polymer are broken down.

Claim 47 (New): A method as claimed in claim 31, wherein the melt processable thermoplastic polymer and the particulate copolymer are mixed under a shear rate of at least 100 s^{-1} .

Claim 48 (New): A method as claimed in claim 31, wherein said melt-processable polymer and said particulate polymer are not caused to chemically react during said mixing.

Claim 49 (New): A melt-processable thermoplastic composition comprising:

- (a) 50-99.5 wt% of a melt-processable thermoplastic polymer; and
- (b) 0.5-50 %wt of a particulate copolymer comprising the residues of a monomer mixture comprising at least 50 wt% of methyl methacrylate (MMA), at least 1 wt% and less than 20 wt% of a copolymerisable acrylic comonomer comprising at least one alkyl acrylate or methacrylate and at least 0.1 wt% of a copolymerisable cross-linking monomer, wherein the weight averaged diameter of said particles of the particulate copolymer is greater than $100 \mu\text{m}$ and less than $250 \mu\text{m}$ as measured in accordance with ASTM D1921.

Claim 50 (New): A composition according to claim 49, wherein the melt-processable thermoplastic polymer forms a matrix and is of polymethylmethacrylate homopolymer or copolymer derived from a monomer mixture comprising 60 - 100 wt% methyl methacrylate and 0 - 40 wt% of at least one other copolymerisable alkyl acrylate or methacrylate.

Claim 51 (New): A composition as claimed in claim 49, wherein the weight averaged diameter of said particles of the particulate copolymer is greater than 150 μm as measured in accordance with ASTM D1921.

Claim 52 (New): A composition according to claim 49, wherein said copolymerisable acrylic comonomer is an alkyl acrylate.

Claim 53 (New): A composition as claimed in claim 49, wherein said particulate copolymer is formed from the residues of a monomer mixture comprising at least 69.9 wt% MMA, at least 5 wt% and less than 20 wt% of said copolymerisable acrylic comonomer and less than 5 wt% of said copolymerisable cross-linking monomer.

Claim 54 (New): A composition as claimed in claim 49, wherein at least 20 wt% of particles of said particulate copolymer are between 60 (250 μm) and 80 (177 μm) mesh.

Claim 55 (New): A composition as claimed in claim 49, wherein at least 75% of said particles of the particulate copolymer are of a size so that they pass through a 300 μm sieve.

Claim 56 (New): A method of preparing a melt-processable thermoplastic composition, the method comprising contacting:

- (a) 50-99.5 wt% of a melt-processable thermoplastic polymer; and
- (b) 0.5-50 %wt of a particulate copolymer comprising the residues of a monomer mixture comprising at least 50 wt% of methyl methacrylate (MMA), at least 1

wt% and less than 20 wt% of a copolymerisable acrylic comonomer comprising at least one alkyl acrylate or methacrylate and at least 0.1 wt% of a copolymerisable cross-linking monomer, wherein the weight averaged diameter of said particles of the particulate copolymer is greater than 100 μm and less than 250 μm as measured in accordance with ASTM D1921.

Claim 57 (New): A method as claimed in claim 56, wherein at least 75 wt% of said particles of the particulate copolymer are of a size so that they pass through a 300 μm sieve.

Claim 58 (New): A method as claimed in claim 56, wherein said melt-processable polymer and said particulate copolymer are not cast after contact together.

Claim 59 (New): A method as claimed in claim 56, wherein said melt-processable polymer and said particulate copolymer are mixed by extrusion under conditions such that particles of said particulate polymer are broken down.

Claim 60 (New): A method of forming an article which comprises shaping a melt-processable thermoplastic composition according to claim 31 in order to form said article.

Claim 61 (New): A method according to claim 60, wherein said melt-processable thermoplastic composition is subjected to conditions such that particles of the particulate polymer in said melt-processable thermoplastic composition are broken down.

Claim 62 (New): A method according to claim 61, wherein said melt-processable thermoplastic composition is subjected to a shear rate of at least 100s^{-1} .

Claim 63 (New): A method according to claim 60, wherein said composition is extruded or co-extruded.

Claim 64 (New): A method according to claim 60, wherein said article is a building component.

Claim 65 (New): A method according to claim 60, wherein when a surface of the article formed of said thermoplastic composition is tested for impact resistance in accordance with ASTM D4226, the mean failure height is not less than 7.5 inches (19.05 cm).

Claim 66 (New): A method according to claim 60, wherein where a surface of the article formed of said thermoplastic composition has a surface gloss measured at a 75° observation angle (according to ASTM D3679) in the range of 4.5 to 30.

Claim 67 (New): A method according to claim 60, wherein where a surface of the article formed of said thermoplastic composition has a roughness (Ra) of less than 2000 angstroms.

Claim 68 (New): A method of forming an article which comprises shaping a melt-processable thermoplastic composition according to claim 49.

Claim 69 (New): A method of forming an article which comprises shaping a melt-processable thermoplastic composition according to claim 56.